

# *Hit and Strike*

Shigeyasu Sawada

## 1. Introduction

This paper is an attempt to investigate the lexical properties of a pair of similar verbs, *hit* and *strike*, from the perspective of Lexical Semantics. Specifically, the differences between these two verbs will be explored, suggesting that there are a few distinctions at a certain conceptual level, in which the structure of an event, when constructed in reference to the real world, is represented, even though the meanings of the two verbs appear to be largely overlapped. In section 2 we discuss four differences, putting an emphasis on the syntactically relevant aspects of these verbs. The differences are not limited to the pair *hit* and *strike*, rather the properties are by and large aligned in a continuum. Section 3 will discuss what their lexical semantic structures should look like.

## 2. Differences between *hit* and *strike*

The descriptions of *hit* and *strike* in ordinary dictionaries say less about the differences than the similarities. They are both used as verbs of giving a violent contact to the entity, which we call the target for expository purposes. Actually, according to Levin's (1993) comprehensive investigation of English verb classes, *hit* and *strike* are both classified into the same verb class dubbed *verbs of contact by impact*.<sup>1</sup> In this section we draw attention to the subtle, but detectable differences between *hit* and *strike* within the context of how we understand the event or its participants involved in it by using the verbs in question. As we will see, however, all the differences are not absolute. Rather they should be characterized as tendencies, or as relative in nature.

## 2.1 Difference with respect to the intentionality of an event

As Levin(1993) noted, *hit* can be used as a non-agentive verb. Actually, *hit* is able to have a non-agentive sense even if an animate subject appears. Consider the following sentences.

- (1) a. Sue hit Fred when she was running in the hallway.
- b. Sue struck Fred when she was running in the hallway.

The matrix sentence in (1a) could be ambiguous with respect to the intentionality of the action, but normally it is construed as unintentional since the context forces an unintentional reading: Sue collided with Fred. The verb *strike*, however, strongly implies an intentional, purposeful action, even if the context inducing an unintentional reading is added, as in (1b). Thus, this sentence has the sense of Sue's hitting Fred with something or Sue's bumping purposefully into Fred.

This contrast, however, turns out to be neutralized when an inanimate subject appears, as shown in (2).

- (2) a. The cup fell down from the table and hit/struck the floor.
- b. The ship hit/struck a reef.

In normal reading, sentences like (2) do not imply an intentional action. Although *strike* does not imply agentivity in these cases, its use seems to convey the higher degree of intensity of impact.

The basic frame of contact-by-impact verbs is just like (2b), in which the entity going into contact appears in the subject position and the entity to be affected in the object position. When an event is described with an agent, the element in the subject position is delegated into the PP *with NP*, as in (3a). What is interesting here is that the frame can be altered, describing almost the same event, to a new frame in which the instrumental phrase is raised to the object position, delegating the entity to be affected to the locational phrase, usually expressed as *against NP*, as in (3b).

- (3) a. He hit/struck the rock with a stick.
- b. He hit/struck a stick against the rock.

This alternation is termed the *with/against* alternation in Levin(1993).

It is worth noticing that when *hit/strike* have undergone the alternation of this kind, they increase the tendency to imply an

unintentional action. But even in this frame, *strike* tends to convey an intentional sense more strongly than *hit*, as shown in (4).

- (4) a. He accidentally hit/\*struck the wall with the desk when  
he put it into the room.  
b. He accidentally hit/?struck the desk against the wall when  
he put it into the room.

The unintentional reading is basically possible in these cases, because the adverb reinforces such a reading. But it is important to notice that *strike* is discernibly less consistent with the unintentional reading.

## 2.2 Difference in repetitiveness

The next difference is concerned with aspect. Most contact-by-impact verbs are used to convey a repetitive action. The degree of repetitiveness varies. In agentive context, for example, *hit* is neutral in repetition, while *strike* is likely to be understood as a one-time action, as shown in the contrast in (6).

- (6) a. He hit a table with a stick for ten minutes/\*in ten minutes.  
b. He struck a table with a stick ?for ten minutes/\*in ten minutes.

It is, of course, possible to put an emphasis on repetition with the modification of an adverb like *repeatedly* in the case of *strike*. Thus the repetition is not contradictory to the sense of *strike*. Note that there are some contact-by-impact verbs which have already incorporated the sense of repetition in their lexical meaning, like *beat* and *pound*.

## 2.3 Difference in the degree of resistance toward external force

There is clearly a distinction in the intensity of impact between the two verbs: *strike* implies the higher degree of impact than *hit*. This fact in turn leads to a difference in the way we conceptualize the object affected — a difference in our understanding of the object as it appears to be.

In general, the object of *strike* is more likely understood as being resistant to the impact from external force. Consider the following contrast.

- (7) a. The car hit (against) the tree.  
b. The car struck (\*against) the tree.

In this frame, *against* in (7a) is optional, but in the case of *strike* it sounds extremely redundant. This suggests that the lexical sense of *against* is already included in the lexical semantic representation of *strike*, but not in that of *hit*.

When *against* occurs with *hit*, the object tends to be understood as being stationary, if anything. That is, the use of the preposition *against* is allowed only when its object is conceptually construed as being hard to move. This fact is illustrated in the structures that have undergone the *with/against* alternation.

(8) a. He struck a stick against the wall.

b. \*He struck a bat against the ball.

The ball is usually easy to move by external force, so the sentence (8b) sounds unacceptable. The acceptability of (8b) would improve, for example, if the ball is understood as being too large to move by the external impact on it.

The distinction in the degree of resistance may provide a partial explanation to the contrast raised in Jackendoff (1990), who noted that the lexical sense of *hit* can extend so as to be used as a verb of ballistic movement, while *strike* does not show this extension, as shown in (9).

(9) a. Pete hit the ball into the field (with a stick).

b. \*Pete struck the ball into the field (with a stick).

This contrast may be accounted for when we assume that *strike* can hardly occur with the object that happens to be conceptualized as easy to move by external force. Thus, since the lexical property of *strike* is inconsistent with the use of a ballistic-moving object, (9b) is unacceptable. The important thing to notice here is not that *strike* cannot be used in this frame, but that *strike* does not have a good collocation with the concept of ball. The expression *strike a ball* gives an image of someone hitting a large stationary ball with something. In this sense, we should not put much emphasis on the impossibility of (9b). Rather, considering that *hit* and *strike* are members of the contact-by-impact verb, it is *hit*, not *strike*, that shows the different behavior, because other members of this class do not express the

ballistic movement by impact.

It is important to notice that *strike* can take a certain kind of path expression. Consider the following sentences.

- (10) a. He struck the fence with the stick.  
b. \*He struck the stick into/through the fence.

According to Levin's analysis, the class of contact-by-impact verb shows the *with/against* alternation illustrated in (3), but it does not display the *through/with* alternation, as in (10), which is most likely to be shown in verbs of penetration such as *pierce*, *stab*, and *stick*. Since the PPs in (10b) are obviously path expressions, it might appear that *strike* cannot take a path expression as Levin argues. But this argument is not accurate.

As said above, the intuition felt in the use of *strike* is that there is a certain amount of resistance to the external force. As far as this intuition is observed, the path expression would be expected to occur with *strike*. Contrary to Levin's argument, actually, the path expression of some kind is allowed under a certain condition.

- (11) a. He struck the nail into the wooden board.  
b. He struck the fence post into the ground.

As they stand, these sentences may sound strange. If the expression of an instrument, say *with a hammer*, is added, however, they sound much better. Even the structures like (10b) sound better when the instrumental phrase is added, as shown in (12).

- (12) a. He struck the nail into the wooden board with a hammer.  
b. He struck the nail through the wooden board with a hammer.

Notice that the syntactic frame in (12) differs in interpretation from that of (10b). In (12), he caused the hammer to go into contact with the nail, forcing it into, or through, the wooden board. This does not mean that he directly affected the nail. The role of the hammer in (12) is called the primary instrument and the role of the nail the secondary instrument in Sawada (1995). Using the terminology introduced there, we should say that (10b) is unacceptable under the condition that the stick is understood as the primary instrument.

Consider the following sentences, in which a dagger is used as an

instrument.

(13) a. ?Brutus struck a dagger into Caesar.

b. \*Brutus struck Caesar with a dagger.

The dagger is conceptually understood as something to be stabbed, but not pounded by another instrument. So (13a) could be acceptable if we construe it as Brutus pushing a dagger into Caesar by hitting it. By contrast, (13b) can be construed as meaning Brutus beating Caesar with a dagger, and this reading is obviously against our concept of dagger.

#### 2.4 Difference in the interpretation of an instrument in an event

There is yet another important difference between *hit* and *strike*. It is related to the nature of an instrument involved in the action described. Consider the following sentences.

(14) a. He hit a flying bird with a stone/with an arrow.

b. He struck a flying bird \*with a stone/?with an arrow.

As seen in (14a), *hit* can occur with a ballistic-moving instrument, which is expressed by *with NP*. However, when *strike* is used in these sentences, the most likely interpretation is that he had contacted the object by manipulating the instrument. Thus *with an arrow*, for example, sounds strange in the context of (14b) unless he had used the arrow as we would use a stick-like object. This seems to suggest that the interpretation of an instrument associated with the use of *strike* must be such that the instrument, in a sense, is a physical extension of the agent. In other words, the agent must be in physical contact with the instrument.<sup>2</sup>

The interpretation of the *with* phrase in the case of *hit* seems to be determined by our understanding of the instrument as it was designed. So when we hear "someone hit a man with an arrow," we understand the man was shot by the arrow, because we know how and for what purpose the arrow is used. In this sense, the lexical sense of *hit* does not specify the use of an instrument; its interpretation is complemented pragmatically by our knowledge of the instrument, although the range of interpretation is certainly restricted within the lexical domain of the contact-by-impact verb. It thus follows that

the instrumental phrase is not licensed by the lexical structure of *hit*, but by some as yet unknown process. In the case of *strike*, however, the instrumental phrase is most likely to be construed as something that is manipulated by an agent's hand: the interpretation is somewhat, though not fully, licensed by the lexical structure of *strike*. This suggests that the lexical structure of *strike* must include the instrument in its original sense.

Another implication has to do with the fact that the contact between the agent and the target is mediated through an instrument in *strike*. At the level of the lexical semantic structure, the contact is indirect. So we can say that the contact implicated by *strike* is understood as the indirect, partial contact mediated through an instrument, whereas the contact of *hit* is conceptually understood as the whole contact.

### 3. Lexical conceptual representation of the two verbs

In this section, based on the discussion so far, we would like to represent the lexical conceptual structures of *hit* and *strike*, though a bit informally.

As discussed in the preceding section, the basic sense of *strike* involves the manipulation of an instrument in its lexical semantic structure, whereas *hit* does not include such a component at least at the basic sense level, even though the instrument movement can be incorporated by a certain lexical process.

Now let us consider how we represent the lexical semantic representations of these two verbs. The basic senses of *hit* and *strike* can be represented, respectively, in (16).

(16) a.  $x \text{ hit } y = [x \text{ go into contact with } y]$

b.  $x \text{ strike } y \text{ with } z = [x \text{ use } z \ \& \ z \text{ go into contact with } y]$

The component  $[x \text{ go into contact with } y]$  is assumed here to be a combination of two more elementary conceptual meanings:  $[x \text{ move to } y]$  and  $[x \text{ touch } y]$ . These two components, which we call the movement component and the contact component, would be necessary for the purpose of explaining finer distinctions of the lexical properties

among individual members of the contact-by-impact verb class.

The movement component, for example, is able to be further characterized in terms of the feature of repetition. Each verb by default specifies its own value of repetitiveness in this component: *hit* is neutral, while *strike* is one. Recall that some contact-by-impact verbs like *beat* and *pound* obligatorily specify this repetition feature as more than one. On the contrary, verbs like *bump*, *slap*, and *thump* are specified as one by default. The contact component, on the other hand, can be modified by the feature of intensity. The higher intensity may lead to the physical damage in the class of contact-by-impact verbs, as in verbs like *smash* and *bash*. The verbs *hit* and *strike*, however, do not necessarily imply any physical damage to the object. Thus phrases like *into pieces* or *apart* are inconsistent with the two verbs, as shown in (17).

(17) a. \*He hit/struck the vase into pieces (with a hammer).

b. He smashed the vase into pieces.

Verbs like *smash*, as illustrated in (b), can occur with such phrases.

The structure [x go into contact with y] should be considered a complex structure compositionally constructed from more elementary structures, which we suppose directly reflect our cognitive abilities. Given this complex structure, the class of contact-by-impact verbs can be more explicitly characterized such that members of this class share this structure with each other. Finer distinctions among members are specified by the addition of certain features.

It should be noticed here that the basic sense of *hit* is incorporated into that of *strike*. Thus, the meaning of *strike* contains more than movement and contact. The additional component is concerned with the use of some kind of instrument, schematically represented as [x use z]. This component must be understood to represent the direct contact use, as argued above. So it should not extend to any variety of uses, which would be almost impossible to characterize in the present situation.

Closer investigation of the instrumental phrase *with NP* reveals that it is very ambiguous in English. Consider the following sentences.



(18) a. She cut the meat with a carving knife.

b. He killed the bear with an arrow.

c. He wrote his documents with a Macintosh.

As seen from the sentences like (18), it is fairly difficult to define a variety of instrument implementations. However, (18a) obviously implies physical contact. As far as *strike* is concerned, the way an instrument is used is limited within the category of contact use.

The basic sense of *hit* indicates that it originally means a simple collision of two things. This contact is conceptually understood as the whole contact, as argued above. Thus the entity of the subject must move to the location of the object, in which the two things come in contact with each other. If this impact turns out to be almost negligible, the sense would lead to that of 'reach' or 'arrive.' So the sense of *hit* is closely related to that of reach or arrival, as in (19).

(19) a. We hit/\*struck New York at midnight.

b. The temperature hit/\*struck a new winter low.

This shift in meaning cannot be found in the case of *strike*, because the contact in *strike* is construed as partial contact. We cannot move a part of ourselves to the goal.

Consider the contrast shown below.

(20) a. Typhoon 20 struck/hit the Noto Peninsula.

b. The plague struck/?hit Europe.

c. The plague struck/\*hit Europe with terror.

As seen in (20a), the distributions of *hit* and *strike* are sometimes overlapped, but the implication turns out to be slightly different. In the case of *hit*, native speakers feel that something reaches somewhere, while *strike* further brings about some internal change, but not necessarily external change, as said before. Furthermore the plague, as shown in (20b), must be understood as being in contact with Europe through some sort of entity. This is true in a metaphorical sense, as in (20c).

The PP *with terror* in (20c) has been said to be an expression of the cause of emotion. However, this expression appears to have a relationship with the instrument *with*, as illustrated in the contrast in (22) and (23).

- (22) a. John struck the fence with a stick.  
       b. John's stick struck the fence.
- (23) a. Cholera struck the town with terror.  
       b. Cholera's terror struck the town.

This expression cannot occur with *hit*, which suggests that *hit* does not contain the movement of some entity in its lexical sense.

It is also important to point out that *strike* can sometimes express "thought." Consider the following sentences.

- (24) a. The plan struck/\*hit me as impossible.  
       b. It struck/\*hit me that he was wrong.  
       c. An idea suddenly struck/\*hit her.

Since *hit* simply means arrival or contact, it does not affect the mental process; *strike* strongly affects the object, triggering some mental change, so it is allowed to express a change in mental process.

#### 4 Concluding remarks

We have discussed the lexical properties with respect to the two verbs *hit* and *strike*, arguing that their lexical semantic representations should be different. The original sense of *hit* stands for the simple collision of two identifiable things. When it is used with an instrumental phrase, the interpretation is pragmatically derived. The primary sense of *strike*, in contrast, already includes the involvement of an instrument manipulated by an agent, because it specifies a particular relationship between the agent and the instrument. We can claim that the structures like "The ship hit/struck the reef" or "He hit/struck the fence with a stick" create slightly different schematic images.

#### Notes

<sup>1</sup> Levin (1993) further divides the class of verb of contact by impact into four subclasses. *Hit* and *strike* fall into one of these subclasses, which she terms the *hit* verbs. Listed in this group are *bang, bash, batter, bump, dash, drum, hammer, hit, kick, lash, pound, rap, slap, smack, smash, strike, tamp, tap, thump, thwack, and whack*.

<sup>2</sup> This relation may be captured by virtue of the billiard model

proposed by Langacker (1991).

#### References

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